UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,009	12/27/2000	Paul Giotta	FREI.P-049	6616

21121	7590	10/06/2004

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EXAMINER
DUONG, THOMAS

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 June 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
  closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
     application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is in response to the amendment filed on June 8, 2004. The amendment filed on June 8, 2004 has been entered and made of record. *Claims 1-20 are presented for further consideration and examination.*

Response to Argument

2.   The Applicants' arguments and amendments filed on June 8, 2004 have been fully considered, but they are not persuasive.

3.   With regard to *claims 1, 7, 13, 17 and 20*, the Applicants point out that:

- *Regarding the field of the invention, Terry does not refer to a message system at all.*

- *There is no reference made to the sending of messages to another client, and no messages are being addressed to another client.*

- *This would perhaps improve communication between the (database) servers, but would not change the communication between the servers/message managers and the session managers/client managers at all.*

However, the Examiner finds that the Applicants' arguments are not persuasive and maintains that the Terry and Theimer references do disclose,

Terry (US005581753A) teaches,

- *comprising a server cluster containing a group of client manager nodes (session managers 22),* (Terry, col.2, lines 1-9; col.4, lines 39-59; col.6, lines 19-63; col.6,

line 64 – col.7, line 57; col.11, lines 52-67; fig.2; Terry discloses of a system that can be applied to mobile computing application (i.e. client messaging) having session managers (i.e. Applicants' *client manager nodes*) communicating with individual clients and servers with storage databases (i.e. Applicants' *message manager nodes*) communicating with session managers to manage the messages)

- *each client manager node of said group of client manager nodes comprising means for connecting to clients and means for managing client connections,* (Terry, col.2, lines 54-64; col.3, lines 9-45; col.6, lines 19-63; col.6, line 64 – col.7, line 57; fig.2; fig.4; col.2, lines 1-9; col.4, lines 39-59; Terry discloses of a system that can be applied to mobile computing application (i.e. client messaging) having session managers (i.e. Applicants' *client manager nodes*) communicating and managing the connections with individual clients and servers with storage databases (i.e. Applicants' *message manager nodes*) communicating with session managers to manage the messages)

- *the server cluster further containing a group of message manager nodes (servers 12) being configured differently from the client manager nodes,* (Terry, col.4, lines 39-59; col.6, lines 19-63; col.6, line 64 – col.7, line 57; fig.2; col.2, lines 1-9; col.4, lines 39-59; Terry discloses of a system that can be applied to mobile computing application (i.e. client messaging) having session managers (i.e. Applicants' *client manager nodes*) communicating with individual clients and servers with storage databases (i.e. Applicants' *message manager nodes*) communicating with session managers to manage the messages)

- *each message manager node comprising means for storing and distributing messages,* (Terry, col.4, lines 39-59; col.6, lines 19-63; col.6, line 64 – col.7, line 57; fig.2; col.2, lines 1-9; col.4, lines 39-59; Terry discloses of a system that can be applied to mobile computing application (i.e. client messaging) having session managers (i.e. Applicants' *client manager nodes*) communicating with individual clients and servers with storage databases (i.e. Applicants' *message manager nodes*) communicating with session managers to manage the messages)

However, Terry reference does not explicitly disclose,

- *said messages comprising a destination information addressing a destination, the system further comprising communication channel means for providing a multicast communication channel between said at least one client manager node and said at least one message manager node.*

Theimer (US006557111) teaches,

- *said messages comprising a destination information addressing a destination, the system further comprising communication channel means for providing a multicast communication channel between said at least one client manager node and said at least one message manager node.* (Theimer, col.1, lines 8-14; col.2, lines 27-33; col.2, line 58 – col.3, line 16; col.4, lines 1-16; col.7, lines 24-67; col.8, lines 1-37; col.8, line 38 – col.9, line 67; Theimer improves on the Terry invention by applying multicasting to the communications between the session managers and the servers. Since, communications between the session managers and the servers are through multicasting channels, it is well known in the art that multicast messages include a destination address)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention was made to combine Theimer reference with Terry reference to

provide lower latency updates in the system. A primary advantage of multicasting is

that it places a relatively low load on the sender, intermediate networks and routers.

The sender does not need to send a separate copy to each receiver to be updated.

Hence, the intermediate networks and routers see only a logarithmic fraction of the

total load. This allows the system to send a large number of updates with relative

frequency. Furthermore, it is advantageous to use "weakly consistent" systems due

to their high-availability, good scalability, and simplicity of design (Theimer, col.2,

lines 29-30))

In summary, the Examiner maintains that Terry and Theimer disclose a system that

can be applied to mobile computing application (i.e. client messaging) having

session managers (i.e. Applicants' *client manager nodes*) communicating and

managing the connections with individual clients and servers with storage databases

(i.e. Applicants' *message manager nodes*) communicating with session managers to

manage the messages. Furthermore, Terry and Theimer, together, utilize

multicasting to communicate between the session managers and the servers due to

the advantageous in their high-availability, good scalability, and simplicity of design.

Therefore, the Applicants still failed to clearly disclose the novelty of the invention

and identify specific limitation, which would define patentable distinction over prior

art.

4.   With regard to the motivations to combine the references, the Applicants point out that:

- *This means that multicast systems arc sufficient for the synchronization of weakly*

  linked databases, for which some inconsistency is tolerated. However, in a

messaging system, where a message is explicitly addressed to one or more

recipients, loss of messages is not to be tolerated. Therefore, in view of the

above teaching by Theimer, one would have refrained from applying a multicast

system as the central element of a message system.

However, the Examiner finds that the Applicants' arguments are not persuasive and

maintains that,

- It is advantageous to combine Theimer reference with Terry reference to provide

  lower latency updates in the system. A primary advantage of multicasting is that

  it places a relatively low load on the sender, intermediate networks and routers.

  The sender does not need to send a separate copy to each receiver to be

  updated. Hence, the intermediate networks and routers see only a logarithmic

  fraction of the total load. This allows the system to send a large number of

  updates with relative frequency. Furthermore, it is advantageous to use "weakly

  consistent" systems due to their high-availability, good scalability, and simplicity

  of design (Theimer, col.2, lines 29-30). Also, as stated by Theimer, the invention

  is an improvement in "the mechanism... for weakly-consistent databases..."

  (Theimer, col.2, lines 50-51) by utilizing "the epidemic update communication

  facility and the multicast communication update facility together" (Theimer, col.3,

  lines 1-3))

In summary, the Applicants still failed to clearly disclose the novelty of the invention

and identify specific limitation, which would define patentable distinction over prior

art.

5.   With regard to *claims 2-6, 8-12, 14-16 and 18-19*, they are rejected at least by virtual of

their dependency on the independent claims and by other reasons set forth in the

previous office action (Paper No.6). Accordingly, rejections for *claims 2-6, 8-12, 14-16*

and 18-19 are presented as below:

Claim Rejections - 35 USC § 103

6.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

7.   *Claims 1-20* are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry et al.

(US005581753A) and in view of Theimer et al. (US006557111B1).

8.   With regard to *claims 1, 7, 13, 17 and 20*, Terry reference discloses,

- *comprising a server cluster containing a group of client manager nodes (session*

   managers 22), (Terry, col.2, lines 1-9; col.4, lines 39-59; col.6, lines 19-63; col.6,

   line 64 – col.7, line 57; col.11, lines 52-67; fig.2; Terry discloses of a system that

   can be applied to mobile computing application (i.e. client messaging) having

   session managers (i.e. Applicants' *client manager nodes*) communicating with

   individual clients and servers with storage databases (i.e. Applicants' *message*

   manager nodes) communicating with session managers to manage the

   messages)

- *each client manager node of said group of client manager nodes comprising*

   means for connecting to clients and means for managing client connections,

   (Terry, col.2, lines 54-64; col.3, lines 9-45; col.6, lines 19-63; col.6, line 64 –

   col.7, line 57; fig.2; fig.4; col.2, lines 1-9; col.4, lines 39-59; Terry discloses of a

   system that can be applied to mobile computing application (i.e. client

   messaging) having session managers (i.e. Applicants' *client manager nodes*)

   communicating and managing the connections with individual clients and servers

with storage databases (i.e. Applicants' *message manager nodes*)

communicating with session managers to manage the messages)

- *the server cluster further containing a group of message manager nodes (servers*

  12) being configured differently from the client manager nodes, (Terry, col.4,

  lines 39-59; col.6, lines 19-63; col.6, line 64 – col.7, line 57; fig.2; col.2, lines 1-9;

  col.4, lines 39-59; Terry discloses of a system that can be applied to mobile

  computing application (i.e. client messaging) having session managers (i.e.

  Applicants' *client manager nodes*) communicating with individual clients and

  servers with storage databases (i.e. Applicants' *message manager nodes*)

  communicating with session managers to manage the messages)

- *each message manager node comprising means for storing and distributing*

  messages, (Terry, col.4, lines 39-59; col.6, lines 19-63; col.6, line 64 – col.7, line

  57; fig.2; col.2, lines 1-9; col.4, lines 39-59; Terry discloses of a system that can

  be applied to mobile computing application (i.e. client messaging) having session

  managers (i.e. Applicants' *client manager nodes*) communicating with individual

  clients and servers with storage databases (i.e. Applicants' *message manager*

  nodes) communicating with session managers to manage the messages)

However, Terry reference does not explicitly disclose,

- *the system further comprising communication channel means for providing a*

  multicast communication channel between said at least one client manager node

  and said at least one message manager node.

Theimer (US006557111) teaches,

- *the system further comprising communication channel means for providing a*

  multicast communication channel between said at least one client manager node

and said at least one message manager node. (Theimer, col.1, lines 8-14; col.2,

lines 27-33; col.2, line 58 – col.3, line 16; col.4, lines 1-16; col.7, lines 24-67;

col.8, lines 1-37; col.8, line 38 – col.9, line 67; Theimer improves on the Terry

invention by applying multicasting to the communications between the session

managers and the servers)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention was made to combine Theimer reference with Terry reference to

provide lower latency updates in the system. A primary advantage of multicasting is

that it places a relatively low load on the sender, intermediate networks and routers.

The sender does not need to send a separate copy to each receiver to be updated.

Hence, the intermediate networks and routers see only a logarithmic fraction of the

total load. This allows the system to send a large number of updates with relative

frequency. Furthermore, it is advantageous to use "weakly consistent" systems due

to their high-availability, good scalability, and simplicity of design (Theimer, col.2,

lines 29-30))

9.   With regard to *claims 2-6, 8, 14-16 and 18-19,* Terry and Theimer references disclose

the invention substantially as claimed,

        See *claims 1, 7, 13 and 17* rejection as detailed above.

        Furthermore, Terry and Theimer references disclose,

        •   *a plurality of message manager nodes in said group of message manager nodes,*

            (Terry, abstract; col.4, lines 39-59; col.6, lines 19-34, lines 35-63; col.6, line 64 –

            col.7, line 57; fig.2; Theimer, abstract; col.1, lines 17-32; col.2, line 58 – col.3,

            line 16)

- *said message manager nodes being configured to comprise destinations,* (Terry,

  abstract; col.6, lines 19-34, lines 35-63; col.6, line 64 – col.7, line 57; fig.2;

  Theimer, col.4, line 65 – col.5, line 5; col.7, lines 24-67; col.8, lines 1-37; col.8,

  line 38 – col.9, line 67; fig.2-3)

- *said system further comprising a plurality of client manager nodes,* (Terry,

  abstract; col.6, lines 19-34, lines 35-63; col.6, line 64 – col.7, line 57; fig.2;

  Theimer, col.4, line 65 – col.5, line 5; fig.2-3)

- *each client manager node comprising computer program code means for*

  sending message data across said multicast communication channel,

- *said message data containing a destination information and not containing an*

  individual address of a message manager node,

- *each message manager node comprising computer program code means for*

  receiving message data comprising destination information matching a

  destination of the message manager. (Terry, abstract; col.6, lines 19-34, lines 35-*

  63; col.6, line 64 – col.7, line 57; fig.2; Theimer, abstract; col.1, lines 8-14; col.2,

  lines 34-38; col.2, line 58 – col.3, line 16; col.4, lines 1-16; col.4, line 65 – col.5,

  line 5; col.7, lines 24-67; col.8, lines 1-37; col.8, line 38 – col.9, line 67; fig.2-3)

10.   With regard to *claims 9-12*, Terry and Theimer references disclose the invention

substantially as claimed,

       See *claim 8* rejection as detailed above.

       Furthermore, Theimer reference discloses,

- *wherein in said group of message managers primary message managers and*

  backup message managers are provided, each backup message manager

  containing the same destinations as one associated primary message manager

and controlling regularly whether said associated primary message manager

functions, wherein each backup manager monitors the multicast communication

on said multicast communication channel and stores the same message data as

said associated primary message manager, and wherein each backup manager

does not send any message data unless said associated primary message

manager fails to function. (Theimer, col.3, lines 58-67; col.7, lines 24-67)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

the invention was made to combine Theimer reference with Terry reference to

increase the availability of the network. By implementing a multicasting design, a

failure in the primary message manager can be quickly detected by the backup and

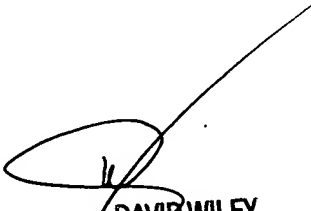switched operation to it.

Conclusion

11.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as

set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is

set to expire THREE MONTHS from the mailing date of this action. In the event a first

reply is filed within TWO MONTHS of the mailing date of this final action and the

advisory action is not mailed until after the end of the THREE-MONTH shortened

statutory period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated

from the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the date of this final action.

12.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Thomas Duong whose telephone number is 703/305-1886 or

571/272-3911 (after 11/01/2004). The examiner can normally be reached on M-F

7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, David A Wiley can be reached on 703/308-5221 or 571/272-3923

(after 11/01/2004). The fax phone numbers for the organization where this application or

proceeding is assigned are 703/872-9306 for regular communications and 703/872-9306

for After Final communications. Any inquiry of a general nature or relating to the status

of this application or proceeding should be directed to the receptionist whose telephone

number is 703/305-3900 or 571/272-2100 (after 11/01/2004).

Thomas Duong (AU2143)

September 30, 2004

/DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100